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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,275	04/05/2005	Yusuke Mitari	00862.103995	3631

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EXAMINER

JONES, DANIELLE E

ART UNIT	PAPER NUMBER
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2626

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/530,275	Applicant(s) MITARI ET AL.	
	Examiner Danelle E. Jones	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/30/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-7, 9-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Mori et al. US 2002/0181765.

Regarding **claims 1, 13 and 14** Mori et al. discloses a pattern identification method of identifying a pattern of input data by hierarchically extracting features of the input data, characterized by comprising:

a first feature extraction step of extracting a feature of a first layer (see para [0056]);

an analysis step of analyzing a distribution of a feature extraction result in the first feature extraction step (see para [0053]);

and a second feature extraction step of extracting a feature of a second layer higher than the first layer on the basis of the distribution analyzed in the analysis step (see para [0057]).

Regarding **claim 3**, Mori et al. discloses the method according to claim 1, characterized in that in the first or second feature extraction step, a feature obtained by

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performing a predetermined transformation to a predetermined feature is extracted (see para [0057]).

Regarding **claim 4**, Mori et al. discloses the method according to claim 1, characterized by further comprising a re-extraction step of re-extracting a feature of a lower layer on the basis of a feature extraction result of a higher layer in the second feature extraction step (see para [0056] – [0058]).

Regarding **claim 5**, Mori et al. discloses the method according to claim 1, characterized in that in the analysis step, a distribution of each of the plurality of feature extraction results is analyzed, and a relative relationship between analytical results is analyzed (see para [0053], [0061]).

Regarding **claim 6**, Mori et al. discloses the method according to claim 1, characterized in that in the analysis step, a distribution within a specific range of at least one of the feature extraction results is analyzed (see para [0053], [0061]).

Regarding **claim 7**, Mori et al. discloses the method according to claim 1, characterized in that in the analysis step, whether the feature is extracted or not extracted within a predetermined range in a distribution of at least one of the feature extraction results is analyzed (see para [0053], [0061]).

Regarding **claim 9**, Mori et al. discloses the method according to claim 1, characterized in that in the analysis step, a size of a range within which the feature is extracted or not extracted in a distribution of at least one of the feature extraction results is analyzed (see para [0053], [0061]).

Regarding **claim 10**, Mori et al. discloses the method according to claim 1, characterized in that in the analysis step, a likelihood of at least one of the feature extraction results or a total of feature detection levels is analyzed (see para [0061]).

Regarding **claim 11**, Mori et al. discloses the method according to claim 1, characterized in that the pattern identification is performed on the presence/absence of a face image contained in the input data (see para [0078] – [0079]).

Regarding **claim 12**, Mori et al. discloses the method according to claim 1, characterized in that the pattern identification is performed on a position of a face image contained in the input data (see para [0079]).

Regarding **claims 15, 19, and 20**, Mori et al. discloses a pattern identification method of identifying a pattern of input data by hierarchically extracting features of the input data, characterized by comprising:

a first feature extraction step of extracting a feature of a first layer (see para [0056]);

and a second feature extraction step of extracting a feature of a second layer higher than the first layer by one on the basis of a feature extraction result in the first layer and a feature extraction result in a layer other than the first layer (see para [0056]-[0057]).

Regarding **claim 16**, Mori et al. discloses the method according to claim 15, characterized in that the layer other than the first layer is a layer lower than the first layer (see para [0056] – [0057]).

Regarding **claim 17**, Mori et al. discloses the method according to claim 15, characterized in that the layer other than the first layer is the second layer (see para [0056] – [0057]).

Regarding **claim 18**, Mori et al. discloses the method according to claim 15, characterized by further comprising an integrating step of integrating feature extraction results by a plurality of feature extractors in the same layer (see para [0053]).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. US 2002/0181765 in view of Matsugu US 2002/0181775.

Regarding **claim 2**, Mori et al. in view of Matsugu discloses the method according to claim 1. Mori et al. does not disclose wherein the second feature extraction step, likelihoods of a plurality of features of the second layer are calculated on the basis of the distribution, and a feature whose calculated likelihood is not less than a predetermined value is extracted as an object. However this feature is well known in the art as indicated by Matsugu. Matsugu discloses a hierarchical pattern identification method that calculates the likelihood of extracted features (see para [0047], [0067], [0068], and [0082]). It would have been obvious to one of ordinary skill in the art to utilize the method of Matsugu with Mori et al. of calculating the likelihood of extracted features to achieve predictable results (KSR International Co. v. Teleflex Inc., 550 U.S.-, 82 USPQ2d 1385 (2007)).

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. US 2002/0181765 in view of Badique US 5,570,434.

Regarding **claim 8**, Mori et al. discloses the method according to claim 1. Mori et al. does not disclose the method of claim 1 characterized in that in the analysis step, a

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barycenter of a distribution of at least one of the feature extraction results is analyzed.

However this feature is well known in the art as indicated by Badique. Badique

discloses a face recognition method that analyzes the distribution of features (see col.

9, line 63 – col. 10, line 4). It would have been obvious to one of ordinary skill in the art

at the time the invention was made to utilize a barycenter of a distribution of the features

for the benefit of enabling the recognition of the mouth and eyes (see col. 2, lines 49-

51).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danelle E. Jones whose telephone number is 571-270-1241. The examiner can normally be reached on M-F 7:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on 571-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DJ
11/07/07



RICHMOND DORVIL
SUPERVISORY PATENT EXAMINER